

REMARKS

Claims 1-15 are pending in the instant application. Claims 1 – 15 stand rejected under 35 U.S.C § 102(e) as being anticipated by United States Patent Application No. US2003/0165431 A1 to Pines et al. The Examiner also states, without explanation, that United States Patent No. 6,818,202 to Pines and United States Patent Application No. 2003/0077628 of Homans could also be used to reject the claims of the present application. The application has been amended. The claims have been amended. Claim 1 has been canceled in favor of previous claim 2. The hyperpolarized target or ligand has been limited to being a hyperpolarized target or hyperpolarized ligand which is isotopically enriched with ^{13}C and/or ^{15}N NMR active nuclei. Basis for this amendment can be found in the specification on page 7, lines 8-10. Claims 7-9 have been canceled since being redundant in view of claim 1. Claims 14 and 15 have been canceled. Applicants respectfully submit that none of the amendments constitute new matter in contravention of 35 U.S.C. §132. Reconsideration is respectfully requested.

Claims 1 – 15 stand rejected under 35 U.S.C § 102(e) as being anticipated by United States Patent Application No. US2003/0165431 A1 to Pines et al. This rejection is respectfully traversed.

Pines does not teach an NMR based method including steps to hyperpolarize at least one ligand or target which is isotopically enriched with ^{13}C and/or ^{15}N NMR active nuclei, as recited by independent claim 2. Therefore, as Pines fails to disclose each and

every limitation of the present invention, Applicants respectfully submit that the present invention is novel thereover. Reconsideration and withdrawal of the rejection are respectfully requested.

The Examiner also states, without explanation, that United States Patent No. 6,818,202 to Pines et al. and United States Patent Application No. 2003/0077628 of Homans could also be used to reject the claims of the present application either by anticipation or by combination. Applicants respectfully disagree.

Pines '202 fails to disclose an NMR based method including steps of hyperpolarizing at least one ligand or target which is isotopically enriched with ^{13}C and/or ^{15}N NMR active nuclei, as does the present invention.

Similarly, Homans does not teach an NMR based method including steps of hyperpolarizing at least one ligand or target which is isotopically enriched with ^{13}C and/or ^{15}N NMR active nuclei. Homans is concerned with false results from NMR binding assays and teaches to overcome such false results by doing NMR spectroscopy of ligand and target mixtures in liquid crystalline solutions and is completely silent about hyperpolarizing the ligand or target in order to overcome sensitivity limitations of NMR binding assays. Moreover, as is apparent from the Examples of the present application, e.g. Example 1 and Comparison Example 1.2, much lower concentrations of ligand are needed in the present invention than in the method of Homans (see paragraph [0043]).

With respect to the Examiner's statement that Pines '202 and Homans could be combined to reject the instant application, Applicants respectfully submit that the cited none of the deficiencies discussed for either reference may be cured by the teachings of the other. Thus, the present invention is patentably distinct over any combination of the cited references.

As claim 1 of the present invention is patentably distinct over the cited references, Applicants respectfully submit that it is axiomatic that dependent claims 2 – 9 are patentably distinct thereover as well.

In view of the amendments and remarks hereinabove, Applicants respectfully submit that the instant application, including claims 2-6 and 10-13, is allowable over the prior art. Favorable action thereon is respectfully requested.

Any questions with respect to the foregoing may be directed to Applicants' undersigned counsel at the telephone number below.

Respectfully submitted,

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